REMARKS

The Office Action dated July 11, 2005 has been carefully considered. Claims 1, 4, 5, 10, 38, 44-48, 50-55, 58, 60-62, 64, 65, and 67-72 have been amended. Claims 9, 16-37, 43 and 66 have been canceled. Claims 73 and 74 have been added. Support for claim 73 is found throughout the specification and in particular on page 9, line 16 and page 18, line 6. Support for claim 74 is found throughout the specification and in particular claim 63. Claims 1-8, 10-15, 38-42, 44-65 and 67-74 are in this application. No new matter has been entered.

Claims 65-71 were objected to as informal. Claims 65-71 have been renumbered as 66-72.

Claims 11-13, 64, 65, 67-72 were rejected under 35 U.S.C. § 112. Claim 1 has been amended to provide antecedent basis for activator. Claims 64, 65 and 67-72 have been rewritten as method claims.

Claims 45, 48, 49, 58, 61 and 62 were objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form. Claims 45, 48, 58 and 61 have been rewritten in independent form. Claim 49 depends from claim 48. Claim 62 depends from claim 61. Claim 74 depends from claim 58. Claims 45, 48, 49, 58, 61, 62 and 74 are allowable.

The previously presented claims 1-10, 13-29 and 63 were rejected under 35 U.S.C. § 102(b) as being anticipated by or obvious in view of U.S. Patent No. 5,206,118 to Sidney et al. Applicant submits that the teachings of this reference do not disclose or suggest the invention defined by the present claims.

The claims have been amended to recite that the polymer is formed into a three-dimensional shape to provide a three-dimensional dosimetric map. Support for this amendment is found throughout the specification and in particular on page 7, line 18 through page 8, line 15, and page 9, lines 3-8. No new matter has been added.

Sidney et al. teach a color-change dosimeter film made of a halogen-containing polymer in which is dispersed an acid-sensitive leuco dye. The dye is substantially free from groups that are sensitive to high energy radiation. The dye becoming colored in acid released from the polymer upon exposure and the film to high energy radiation. The dye retains the color substantially unchanged in the film after the exposure of the film to high energy radiation is

completed Sidney et al. do not direct to use polyurethane as an critical part of the invention, rather they teach a protective overcoating of polyurethane which can be used to provide abrasion resistance and triggering of the dye by an ambient light and changes in intensity after irradiation. Sidney et al. further teach that the thin polyurethane coating is not critical to the use of the film dosimeter, and may inhibit measurements under some conditions. (Col. 10, lines 58-68.)

In contrast to the invention defined by the present claims, Sidney et al. do not teach or suggest a shaped solid dosimeter device in which a transparent or translucent polymer is formed into a three-dimensional shape to provide a three-dimensional dosimetric map. To the contrary, Sidney et al. teach a color-changing dosimeter film which does not provide a three-dimensional shape or three-dimensional dosimetric map. As described in Sidney et al., a dispersion of an acid-sensitive leuco dye in an organosol of a halogen-containing polymer is coated on a substrate and heated to fuse the particles of the dispersion into a continuous color-change dosimeter film (col. 4, lines 49-55). Accordingly, there is no teaching or suggestion in Sidney et al. of forming a three-dimensional shape to provide a three-dimensional dosimetric map. Rather, Sidney et al. provides color change of the entire film. In contrast, the present invention provides a three-dimensional dosimetric map representative of the three-dimensional energy field to which the plastic had been exposed and can be quantified at high spatial resolution, thereby providing an accurate, stable, storable record in three dimensions of the radiation exposure or dosing event(s).

With regard to claims 14 and 15, Sidney et al. disclose a heat stabilizer Ca, Zn stabilizer (Mark V-1523). However, Sidney et al. do not teach or suggest a UV stabilizer. Applicant submits that it is not obvious to one skilled in the art that a heat stabilizer would act as a UV stabilizer.

With regard to claim 63, as note by the Examiner, Sidney et al. do not teach or suggest that the dosimeter can be erased by heat or other means. Rather, Sidney et al. employs heat to practice the invention (see col. 4, line 59; col. 5, line 4) and employs heat stabilizers (col. 8, lines 31-45). Applicant submits that there is no teaching or suggestion in Sidney et al. that the dosimeter can be erased by heat or other means and it is not known in the art to erase three-dimensional data from a dosimeter with heat. Applicant requests the Examiner to provide

a reference to support the allegation that "it is well known and conventional that heating a dosimeter can erase or anneal any accumulated radiation dosage."

In view of the foregoing, Applicants submit that all pending claims are in condition for allowance and request that all claims be allowed. The Examiner is invited to contact the undersigned should he believe that this would expedite prosecution of this application. It is believed that no fee is required. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 13-2165.

Respectfully submitted,

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